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ABSTRACT

In an effort to capture the feeling of the operations of the Health Start projects, the experiences of eight of the 29 local projects organized in 1971, representative of the mix of approaches taken in the first year, are described, with emphasis on obstacles and strategies as well as successes. The projects reviewed are in Arkansas, North Carolina, Colorado, Michigan, Oregon, Maine, Arizona, and Oklahoma. Diversity is stressed regarding methods of detecting health problems, sources of health services, facility arrangements, educational instruction methods, and staffing. All of them have the same objectives: to increase the number of disadvantaged children receiving adequate medical and dental services, to develop methods of ensuring the delivery of health services in areas of limited health care resources, and to develop better methods of coordinating and using existing resources to provide health care to disadvantaged children. (LH)

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WHAT IS HEALTH START?
PROFILES OF SELECTED PROJECTS

by
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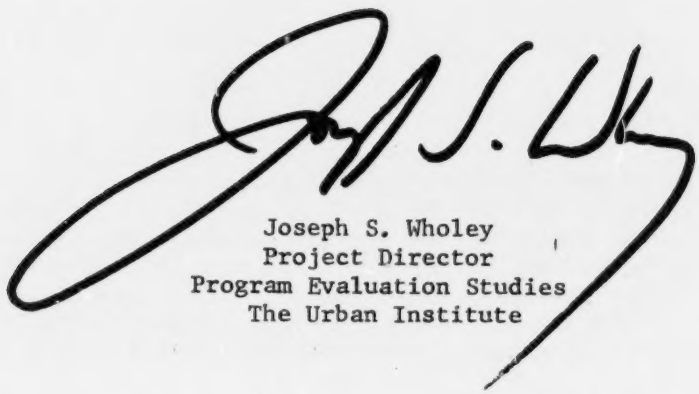
Preface

This report was prepared in an effort to capture the feeling of the operations of the Health Start projects. An attempt was made to select projects which were representative of the mix of approaches taken in the first program year. Emphasis was placed not only on the successes achieved but also on the obstacles to success and the strategies used to overcome problems encountered.

More technical reports on the Health Start program have been prepared - Health Start: Interim Analysis and Report (Urban Institute Working Paper 961-2) and Health Start: A Supplemental Report on Performance in the First Half Year (Working Paper 961-3) by Joe N. Nay, et al.

This report was prepared under the general supervision of Joe N. Nay and Leona M. Vogt.



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INTRODUCTION

The Health Start program was developed in 1971 by the Office of Child Development of the U.S. Department of Health, Education, and Welfare as a demonstration effort to provide both needed medical and dental services and health education to economically disadvantaged children below six years of age. The objectives of Health Start are to increase the number of disadvantaged children receiving adequate medical and dental services, to develop methods of ensuring the delivery of health services in areas of limited health care resources, and to develop better methods of coordinating and using existing resources to provide health care to disadvantaged children.

This paper describes the experiences of eight of the twenty-nine local Health Start projects organized in 1971. In the first year of Health Start, the program guidelines were flexible and left room for diversity in local plans and operations. And diversity there was: The projects ranged in size from 75 children in the smallest project to 1806 children in a large screening project. Methods of detecting health problems ran the gamut from mass multiphasic screening to full physical and dental exams for each child. And sources of health services included private practitioners, clinic personnel, medical students, trained paraprofessionals, and Public Health Department staffs. Some projects provided classroom settings, other day care arrangements, some only health clinics and, in one instance, an outdoor full-day camp experience along with the health services. Health education varied from Head Start-like classroom situations, to home instruction for parents and children, to large evening meetings for parents only. Some projects didn't offer health education at all. Some projects used community aides; one project was a nurse with a bus. So the result was diversity and demonstration, difficulty and success.

Background. Health Start grew out of the success of the health care component of some Head Start projects--and out of recognition that year-round follow-up was necessary to ensure that necessary medical and dental treatment would be received by children in whom health problems might be detected through screening and physical examinations. Health Start is based on the Head Start philosophy that "physical and mental well-being can only be promoted through a comprehensive health care program--one that provides for medical, dental, nutritional, and mental health services, each with preventive, diagnostic, curative, and rehabilitative aspects."1/

1/ Gertrude Hunter, "Health Care Through Head Start," Children, July-August 1970, Vol. 17, No. 4, p. 149.

"A comprehensive program implies a tying together of all the aspects of health care in a mechanism for continuing health supervision. When casefinding services are provided by themselves, as they so often are in community health programs, there is no assurance that curative or rehabilitative services will follow. Similarly, the identification of treatment resources does not in itself guarantee efforts toward casefinding and prevention."1/ To overcome such fragmentation of health efforts, administrators of local Health Start projects are expected to develop techniques to assure children of continuing health care by coordinating existing resources (funds and/or health services).

Grantees are required to draw up a clear plan of how health services are to be provided the children participating in their program. All Health Start projects must include a Health Coordinator, preferably a registered nurse with public health nursing experience, whose job it is to enlist community and agency support for the Health Start program and to ensure that medical and dental examinations, immunizations, and necessary medical and dental care are received by every child enrolled in the local Health Start project.

Demonstration projects in 1971. Health Start projects begun in summer 1971 had only a short time in which to plan and begin operations. For that reason, much of the local planning went on after the program year began. Nevertheless, much was learned from the first year Health Start demonstration projects that can have value in planning the health components of day care, summer Head Start, and year-round Head Start projects. The following pages outline the 1971-1972 Health Start projects carried out in Benton, Arkansas; Boone, North Carolina; Center, Colorado; Flint, Michigan; Hillsboro, Oregon; Penobscot, Maine; Tucson, Arizona; and Tulsa, Oklahoma.

These projects were chosen because of the distinctive approaches which they took to Health Start: Benton, successfully coordinating many resources; Boone, using a team of medical students to provide screening; Center, importing services to serve a rural community which had almost no health care available; Flint, building on a foundation-sponsored child care center to provide comprehensive health care; Hillsboro, developing a well-planned aide training program; Penobscot, running an outdoor camp for the children and parents while providing health services; Tucson, dividing their resources in two different types of communities: one in an urban area with many resources and one in a community where very little health services exist; and, finally, Tulsa, where paraprofessionals were trained to conduct mass multiphasic screening for 1800 children.

The brief descriptions that follow give some ideas of the problems encountered (and solutions devised) in delivering needed health services to children: transportation problems, problems in coordinating existing health services, problems in getting access to services, problems in

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1/ Ibid.

attempting to fill gaps when services were simply unavailable in a number of rural areas, administrative problems that threatened project success.

Health Start, 1972. Beginning in the summer of 1972, Health Start is placing even greater emphasis on the coordination of resources, attempting to show how needed health services and health education can be obtained by careful planning and cooperation among providers of health care and financing mechanisms. Specifically, it is hoped that HEW resources from agencies other than OCD will be used in the Health Start program. Two major sources of health resources have been identified, Title XIX (Medicaid) and Title V (Maternal and Child Health). Plans have been made at the national level to create formal HEW Health Start committees at the regional level including Office of Child Development, Health Services and Mental Health Administration, and Social Rehabilitation Service personnel to aid the projects in the coordination of services. The story of the second year of Health Start, as yet untold, should go well beyond the story we tell below. It is hoped that much will be learned to reduce the fragmentation of health services for the poor in addition to providing health care to children in poverty.

BENTON

In many ways the Benton Health Start project was a model of what a good program should be. It was well planned and its cost per child was reasonable - actually the median of all 29 Health Start projects. Through informed and tough negotiating, costs were reduced and money freed for additional treatment. The entire program was characterized by solid, flexible planning and well coordinated services.

2500 square miles of Saline, Hot Spring and Clark Counties are served by the Benton, Arkansas Health Start project. Benton, the center of the area, is approximately twenty miles west of Little Rock. Fifty-six percent of the three counties' total population of 79,607 is rural and 29% of the families have incomes of under $3000 per year. Broken down by county, Saline's population is 36,107 and 20% of the families have incomes below $3000; Hot Spring has 21,963 inhabitants, and 2,177 families (33%) are below the $3000 per year level; and Clark County with a population of 21,537 is the poorest with 48% of families with incomes under $3000.

The objective of the Health Start program in the tri-county area was to provide medical service to all six-year olds about to enter school who were not receiving care through any other Head Start or year-around day care program. The hope was to provide screening, testing and follow-up care in twelve centers set up in the three counties for the estimated 250 eligible children.

Planning for the program was done by the Health Coordinator and Public Health Nurse, and the CAP Director in approximately five weeks. The Parents Advisory Council of the Day Care program and the CAP Board of Directors okayed the grant without changes. After the project was approved, the American Association of Pediatrics consultant and representatives of the Public Health Service were especially helpful in refining the program. The consultants helped deal with specific arrangements for service, and their down-to-earth advice saved Health Start a substantial amount of money - money used to buy additional care for the children.

Recruitment of the 250 preschoolers was to be done by the Health Coordinator, three licensed practical nurses (later changed to County Health Coordinators when nurses couldn't be found) and three health aides. Welfare Department, Health Department and Head Start lists were to be used in this process. Once identified the children would be screened and tested by a variety of providers. Originally, area physicians were to give physicals and the University of Arkansas School of Dental Hygiene was to offer dental exams. A staff psychologist would be on hand for psychological evaluations. Vision, hearing, and speech screening as well as laboratory tests were planned.

Recruitment, even with the additional active participation of many local CAP workers, was slower than anticipated and resulted in enrolling only 209 Health Start children.

Medical histories of the preschoolers were taken by the aides and county coordinators. The staff had been trained by people from the State Health Department to do vision and hearing screening, and these

tests took place at the 12 Health Start centers. The Health Department retested any questionable cases. Home visits by the aides and coordinators were made to collect stool specimens and to read the children's TB skin tests. Speech screening was dropped from the program. Laboratory tests were mainly given at the Health Start centers.

University of Arkansas Medical School residents gave physicals at the Gurden, Malvern, and Benton centers at reduced cost. This change in plan--use of residents instead of local physicians--was suggested and arranged by the AAP consultant as an efficient money saving device. Another change, the deletion of routine psychological evaluations, was also made on the advice of the American Association of Pediatrics consultant. Any child with suspected pathology was individually referred for testing or treatment. Dental exams, as planned, were given at the University of Arkansas School of Dental Hygiene at a reduced fee of $3.00 per child.

Some of the medical conditions identified by the screening and testing were impetigo, heart mumurs, urinary tract infections, asthma, anemia, diabetes, speech and hearing problems, malnutrition, and sickle cell anemia. Health hazards in the form of environmental problems abound in the rural tri-county area. There are outside toilets, lack of screens on windows, generally unsanitary conditions, as well as deteriorating housing and deficient diets. There is also little knowledge of how to deal with these problems. Through Health Start efforts, families are referred to food stamp programs, to home loan programs if eligible, and to family planning classes.

The planned treatment program for the identified medical conditions included immunizations and dental care. The following agencies would also provide care:

1. The Crippled Children's Division for hernia, heart, orthopedic and other conditions.

2. The Lions Club for a limited number of eye glasses.

3. Child Development Center for psychological testing and counseling.

4. The University of Arkansas Medical Center for treatment of long term conditions.

5. The Child Guidance Clinic for psychological evaluation and treatment.

6. The University of Arkansas School of Dental Hygiene for prophylaxis and fluoride treatment.

7. The Community Action Program General Medical Clinic for a limited amount of follow-up care. The General Medical Clinic is an OEO funded program which pays a $400 per month retainer to two physicians to accept up to 20-25 CAP referred patients per week.

Treatment delivered to the children proceeded as outlined above. Through the good offices of the Public Health Service, the low rate of $4.00 per visit was negotiated with participating dentists. As of

December 15, 1971, of the 157 children who have received dental exams, 14 were judged okay; 89 are awaiting treatment; and 54 were referred and successfully treated. One hundred sixty-nine Health Starters have received medical evaluations. One hundred forty were okay; five are awaiting care; four were referred and are in treatment; and twenty were referred and have completed treatment. The two children of 170 tested who had positive TB tests are awaiting care. Three of the 175 given hemoglobin tests have been referred for further treatment or diagnosis. The vision of 154 children tested okay; two are awaiting care; three are in treatment; and three were referred, treated and are okay. Of the 157 given hearing tests one child is awaiting treatment and five referred and successfully treated. Testing uncovered six cases of sickle-cell anemia and these preschoolers have been referred. Forty-six of the 59 children who received stool tests were okay; one is awaiting treatment, and 12 were referred, treated and are now well. In addition, of the 168 children who had urine tests, 156 were okay; ten are awaiting care; and two others were referred and have been treated successfully.

Health education was planned to improve habits of personal health care and health behavior, thus developing two tools essential to preventive medical care. Parents and children were each to receive one-half day per week of education on subjects such as hair grooming, care of hands, teeth and body, introduction to new foods and food preparation, good health practices, and accident prevention. Use of the "Healthy That's Me" curriculum was planned.

In practice health education was the weakest link in the Benton program. The "Healthy That's Me" curriculum arrived late and the Head Start rather than Health Start staff was trained to use it. Health education was completely dropped for the parents but the children did receive six sessions over the summer on the proposed subjects.

The strengths of the Benton project were many. A competent and aggressive Health Coordinator arranged for extensive in-kind services and so was able to offer the children more comprehensive follow-up care. In addition to the savings resulting from the participation of residents and from the negotiated dental fee, Health Start's twelve centers were rent free. The program involved Neighborhood Youth Corps, Mainstream and Vista workers and was able to use surplus federal vehicles at reduced travel costs. The Emergency Food and Medical Program paid for dental extractions and any follow-up care given at the General Medical Clinics. Another strong plus for the program was the creative use of the AAP and PHS consultants. Benton Health Start was, overall, a solid program which successfully identified and served its target population.

BOONE

Frankie G., a Health Starter in the tri-county Boone, North Carolina program had an individual health care plan developed especially for him. As the first step in the Health Start process, he was examined and fully screened by a student health assessment team made up of both medical and graduate students. The team's evaluation as well as the results of Frankie's laboratory tests were then used to develop his personal health management plan at a conference attended by the team and a consulting physician. Once the plan had been developed, the Health Coordinator and the Social Service Department representative from Frankie's county met to assign all of the tasks identified as necessary to insure Frankie's good health. As a result of this meeting, a cross reference calendar was set up by the Health Coordinator to make sure that appointments were kept and all follow-up treatment received. And Frankie wasn't a special case--all 215 Health Start enrollees in Avery, Mitchell, and Yancy Counties received the same kind of in-depth evaluation and personalized care.

The tri-county Health Start area, a rural mountainous region of Northwestern North Carolina, is characterized by very few medical facilities and very few medical providers. There are only seventeen physicians serving the three counties which have a combined population of 50,000. Many of these physicians are only part-time. In the larger area, including the Boone target area, served by the Regional Health Council of Eastern Appalachia, 64% of the 72,000 children are members of households in the lower socio-economic group, and 85% of the children under six do not receive any sort of financial aid or subsidized medical and dental services.

Closer to home, an evaluation of 225 Head Start children conducted during the summer of 1970 in Mitchell and Yancy Counties found 71% with untreated medical problems, 18% with untreated speech problems, 21% with untreated hearing defects, and 66% with untreated dental problems. It also revealed that 25% of the 225 six year olds were unready for or only minimally ready for the first grade, and 63% needed psychological treatment and follow-up. Recent evidence further indicated that 67% of all preschool children show blood levels indicative of iron deficiency anemia due to malnutrition. Nutritional problems in the area generally are of very serious and as yet unmeasured magnitude.

The most unusual feature of the Boone program was the use of the medical student team system to screen, test, and develop individual health management plans for the children. The students' involvement in the project was made possible by the generosity and financial support of the Student American Medical Association and the North Carolina State Internship Office. This approach was planned in three group meetings in a one month period. A local pediatrician learned about the Health Start funds from the OCD regional office, and contacted the local CAP office. Along with this pediatrician, local dentists, private physicians, and representatives from the following organizations were involved in the planning; the Social Service Departments of the three counties, the Public Health Departments of the three counties, the local Development District of the Appalachian Regional Commission, the Board of Education, Title I, Head Start and CAP. Boone's program was designed to test the pediatrician's

Comprehensive Health Plan which he hopes to have implemented by nine mountain counties Health Departments. His master plan calls for the creation of a mechanism to insure a unified approach to the health problems of all children, birth to twenty-one, in the region. Health Start provided the opportunity to test both the plan's general philosophy of cooperation and shared resources as well as some of its specific elements, such as the patient history form, on the birth to six year old children from the three counties participating in the program. The CAP Economic Resource Developer wrote the proposal.

The project was planned for the unserved children in the area who were either younger siblings of Head Start children, children on the Head Start waiting list, or low income preschoolers identified by health clinics and day care centers. In addition, a list of AFDC eligible students and Public Health Department referrals were used in recruitment.

The objectives of the Boone project were five-fold. The first was to identify as many as possible, with a minimum of 225, of the area's preschool children with unmet health needs. Secondly, the medical team would assess the health needs of the children and use the assessment as the first stage in developing the individual health management plans. Next the staff would set up the plan, carry it out, and describe the results. As the fourth objective, the project would create parental involvement and the community structure for establishing health priorities and providing health education. As the final step, the Health Start program would be evaluated.

The plan further called for the collection of medical and social histories, the provision of physical exams, routine blood tests and urinalysis, special tests when needed, dental screening, prophylaxis and fluoride treatment, hearing and vision testing, developmental evaluation, and diagnostic and treatment for sick children. Most of the screening services were to be provided by the team of medical and graduate students under the close supervision of local pediatricians. All of this was to be overseen by the Health Coordinator, her assistant (later replaced by three County Social Service Aides), and a Social Service Coordinator.

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Frankie and his fellow Health Starters were screened much as planned. Medical students took complete histories, did physical screening under physician supervision, and gave a TB tine test. One of the graduate students gave the Denver Developmental test to all children under four and one-half years of age. For those children over four and one-half, the student gave an academic readiness test especially devised for this group of children. Another graduate student coordinated all exams and did hearing and visual screening. Any abnormal vision screening was re-evaluated by the Health Coordinator before referral to an eye clinic for definitive diagnosis and therapy. Additionally, each child received height, weight and head circumference measurements. One medical student especially interested in the problems of deficient diet determined the circumference of the arm and thickness of skin folds as a measure of the children's nutritional status. A volunteer laboratory technician gave stool exams, hematocrit and complete differential tests. Although planned, dental screening never took place.

One of the major obstacles to the success of the Boone Health Start program was the lack of medical facilities and providers in the tri-county area. After the complete medical screening was done, referrals had to be made to already overloaded County Health Departments or overwhelmed physicians and dentists. In both Avery and Mitchell Counties, the Health Coordinator had to provide nursing services because of the lack of county resources and staff.

Despite these disadvantages, the program still managed to deliver a great deal of service to the Health Start children. Only six of the 215 enrollees (ten children short of the goal) have not received their medical evaluations, and all thirty-three who needed additional care have been successfully treated. Of the thirteen needing follow-up hearing care: five are awaiting treatment, three are in treatment, and five have been successfully cared for. Only three of the children have not received their hematocrits. Of those tested, 178 were OK; two are awaiting treatment; fifteen are in treatment; and seventeen have been treated and are well. The most prevalent disorders are caused by cardiovascular, ear, nose and throat, orthopedic, and/or nutritional problems. The dental needs of the Health Starters were not met at all.

Health education was vaguely planned and never materialized. Parents brought their children to the nine centers in Head Start, Health Department, and school buildings and spent the screening day with them. But there was no formal health education during that period nor later in the home. Nutritional counselling was also absent.

The Boone program was fortunate in receiving so many in-kind services, and unfortunate in being weakly organized. In addition to the completely subsidized nine student medical team each county paid the salary of a Social Service Aide. The County Health Departments also subsidized their representatives as well as a PACE student for recruitment, equipment and space. Head Start personnel helped out in screening and transportation, and Neighborhood Youth Corps workers were loaned to the program. The Principal of Avery High gave three days of his time; parents volunteered transportation; cooks were paid for by Head Start; and a school counselor and his wife worked with the students on the development and use of the psychological test. Vitamins were provided by the Emergency Food Service, and food was donated by both Head Start and individuals from the area. Medicine and clothing were also donated.

The organization of the program's services was complicated by the administrative problem of having to coordinate three independent counties. An administrator could have provided the missing ingredient in a project which found the Health Coordinator, in addition to carrying out her leadership duties, providing nursing services in two counties.

Boone's project must be given a mixed rating. It is clear that in this demonstration project, designed by a physician especially interested in the delivery of comprehensive pediatric services, the emphasis of the program was on medical care and training at the expense of health education and dentistry. Whatever its final score, however, Health Start did start Frankie and 214 other children, on the road to good health.

CENTER

Saguache County, Colorado, is a rural, poverty stricken, and medically starved area that is served by the Center Health Start project. What is special about this program is that through the good offices of three para-professional health aides and the Health Coordinator, screening and treatment have been brought to 177 children who would otherwise not have been served. The success of the program was based on the job they did in coordinating all available health resources and in attracting new medical resources to the area.

The population of Saguache County is approximately 4000, and its only two cities, Center and Saguache, have estimated populations of 2012 and 700 respectively. Fifty-eight percent of Center's population is Chicano and 42% is Anglo. The extreme poverty of the area is unquestionable. Two-thirds of this farming community's residents fall below the federally established poverty guideline, $3200 for a family of four. The average family income in Center is $3369, but the Chicano family income is only $2410 as compared to $4916 for the Anglo family. Eighty-three percent of the Chicano population is below the poverty line, and fifty-six percent of the Chicano families earn less than $2000. These figures do not accurately reflect the intensity of the Chicano families' poverty because adjustments were not made for family size--and the Chicano family averages 5.24 members as compared to 3.10 members in the Anglo family. The Anglos in Center own 96% of the businesses and hold 67% of the skilled jobs. Chicanos are usually employed as farm laborers or as unskilled workers in potato sheds.

Disheartening as these income figures are, the statistics on Saguache's health resources are just as discouraging. There is only one physician in the area, and he has been out of commission since undergoing major surgery this summer. The County has few dentists and no hospital. One Public Health Nurse does serve the residents, and the San Luis Valley Mental Health Clinic, across the County line in Monte Vista, is open two days a month when a psychiatric team from Pueblo and Denver visits. What regular service there is is given on weekends at the Saguache County Medical Clinic held in the Head Start Center. The Colorado Freedom from Hunger Foundation has donated $15,000 for a clinic building, but the project is still in the planning stage.

First awareness of the Health Start program as a partial solution to Saguache's health crisis came when the Head Start Director read an article announcing availability of funds in the Denver Post on March 1, 1971. Planning began on March 15, and the proposal was submitted on April 30. There were many individuals and agencies involved in the planning in addition to Marshall. Primary resource people came from: Saguache County Community Council (the delegate agency) Head Start Parents' Council, Saguache County Medical Clinic Board of Directors, San Luis Valley Area Council, Colorado Department of Public Health, and the Departments of Psychology and Special Education at Adams State College. Also very involved in the planning were the Saguache County Public Health Nurse, the Saguache County physician, the migrant health nurse, two County Commissioners, and the Saguache County Head Start Health Aide.

The anticipated health problems were infant diarrhea, ear, nose and throat infections, nuisance diseases like impetigo, pink eye and ringworm, vitamin deficiencies, mild anemia, kidney ailments, bronchitis, and dental problems. According to 1970 figures, 60% of 120 children in the County who were examined needed extensive dental care. During the 1970-71 school year, the Center Head Start program spent $3369 on dental work for 54 children. These figures gave the Health Start planners some idea of the magnitude of the dental problems. In addition, they further identified the major obstacles to good pediatric health care as lack of transportation, lack of health resources, and lack of an adequate referral service. They set out to remedy the situation.

A summary of services that were planned to go to the children, two and one-half through six years old, included:

1. Full medical exam and laboratory tests.
2. Follow-up testing as indicated by preliminary tests and screening.
3. Vision, hearing, speech, and psychological testing.
4. Follow-up pediatric care as needed.
5. Complete immunizations.
6. Referral service to specialists outside the area.
7. Dental exam, prophylaxis, and topical fluoride treatment.
8. Dental restoration when needed.
9. Forwarding and sharing of records with post-program health services.

Also planned was a comprehensive health education program for parents, Head Start staff members, and children. The key to this program was to be a staff of three non-professional community health aides. The "Healthy, That's Me" curriculum was to be used in conjunction with a "home task system," in which parents would carry out specific tasks with their children at home to reinforce what was taught in health education sessions. Health Start also hoped to develop a system of informal individual and/or small group health education for the children during the regular nine month Head Start class year.

The Center Health Start project has largely succeeded in realizing its goals in what would seem an unpromising area. Except for some problems in developing the health education effort, most objectives are being met. Also because of good management, Health Start was able to enroll and serve 177 children, fifty-two more than planned.

Three indigenous health aides were hired, and they did the door-to-door contacts necessary for recruitment. Lists of Head Start siblings were used in recruiting. Once eligibility was determined, the aides

divided responsibility for the children on the basis of which aide had the best relationship with the family. After winning the confidence of the families, the aides made all appointments, provided transportation, and did follow-up on all no shows.

Screening proceeded as planned. Medical evaluations were done by fourth year medical students and a Child Health Associate from the University of Colorado. In addition, five doctors from the medical school came to help give the physicals. Ninety-three percent of the children have now received their medical evaluations, and 63% of these were found to need care. Fourteen percent have now completed treatment; 47% have treatment underway; and 2% are awaiting care. Health Start had the services of a dentist during the summer. He evaluated all of the children old enough to receive this service. Thirty-five percent of the preschoolers needing dental care have received it; 22% are in treatment; and 1% are awaiting care. In September, however, the dentist moved to another part of the State and Saguache County is again without this resource.

The health aides, using the Snellen chart, did vision screening. Ten children who failed were taken to an optometrist. Four have been fitted with glasses. Appointments for twelve others have been made at a vision clinic sponsored by the State Department of Public Health. A total of 40% of the Health Starters have been screened. Aides also did hearing screening. Eighteen children who failed the tests were taken to Adam's State College for further testing. Ten children have begun lip training. As of December, 60% of the children had received hearing screening.

Psychological and speech tests were given by trained students from the Department of Special Education at Adams State College. Tests given the three through six year olds were the Denver Developmental, the Denver Aptitude Screening Exam, the Illinois Test of Psychological Aptitude, and the Peabody Picture Vocabulary Test.

The Health Start staff also collected all available information on the immunization histories of the children. This information indicated that of 152 Health Starters, 68 needed DPTs, 69 needed polio vaccine, 128 smallpox, 79 measles, and 92 rubella. Parents were informed of their children's needs and were asked to take them to the immunization clinic which was held once a week. Charts were made to follow each child's progress in this program, and the Health Start staff kept in touch with parents until the innoculation program was complete.

Staffing meetings to discuss individual children and to develop personal treatment plans have been hosted by Adams State College. Health Start aides, school and Health Department personnel, as well as area providers attend. Screening and testing results and the child's family background are discussed in an attempt to get a unified picture of his health situation. Fifty-five of the children discussed thus far needed immediate attention. Ten had auditory problems; seven motor visual problems; twenty-one need a psychological assessment; eight need neurological exams by an M.D.; twenty-four need nutritional help; and one has

cerebral palsy and needs physical therapy. Four children were identified as having above average abilities, and special conferences with their teachers are planned.

Saguache County is in the center of a streptococcal disaster area. The incidence of infection is extremely high and is difficult to combat. Children of large families infect and reinfect each other, and the parents often cannot afford to treat all of their children at one time. A school program developed last year by the Health Coordinator and a physician from the Streptococcal Disease Section of the Center for Disease Control, HEW, did much to control strep infections. All children who reported sore throats were cultured in addition to a randomly selected 10% of the entire school population. If a culture was positive, parents were notified and asked to arrange treatment. However, it was not until the State Public Health Department made free penicillin available last October that the program could become fully affective.

Nutrition problems are not as easily solved. The food stamp center is 26 miles from Center. There is no public transportation and, when aides have provided it, they found the process lengthy and demeaning. The summer Child Health Associate returned on her own time in the fall to present a nutritional skit and dinner with some of her classmates, but only 14 of 112 people came. It is clear that in Center nutritional problems must be approached on an individual basis. A great deal of thought is being given to how best to handle this problem.

Formal health education generally has not proven to be a satisfactory concept in this project. The staff did not find the "Healthy, That's Me" curriculum appropriate to the Saguache situation and replaced it with a one-to-one effort directed by the Health Coordinator and carried out by the aides. When Health Start children went to the dentist, parents saw a film explaining the treatment.

Lack of time and funds for staff training before the program began was another problem for the program and its absence was a handicap for the aides. Aides were put to work as soon as they were hired and, except for a three day nutritional workshop in Center, training was completed on the job. During the school year more structured training was available. On December 16, in Monte Vista, the Colorado State Department of Public Health sponsored a newborn and preschool workshop. In addition, each worker has now spent a day traveling with the community home health aide from the Sangre de Cristo Clinic in San Luis. Aides have also visited a bilingual-bicultural school program in Johnstown, Colorado. More training is anticipated for next years project.

With or without training, the Health Start staff was successful in its attempt to bring new resources to the area. The Health Coordinator arranged for special programs through colleges and universities and has involved most of the areas individual and institutional health providers. A doctor from the National Health Service Corps has recently been recruited to serve Saguache County. Old and new resources were made available and acceptable by the hard work of the Health Start Coordinator and her aides.

Through good organization and hard work, this project has found, penetrated and is serving a pocket of extreme medical and health need in an area of scarce medical resources. Not only have 63% of the children examined needed medical care; but almost half of the children had height, weight, or head circumference measurements ranking near the third percentile or lower. Most of these have obvious nutritional problems. The confidence of the families has been obtained and the children presently enrolled will be treated. It is hoped that what Health Start has begun can be continued after this program year is over.

FLINT

Health Start in Flint, Michigan, affiliated with an on-going educational and recreational program available to many of the city's low income preschoolers. For some thirty years Tot Lot, financed by the Mott Foundation and run by the Board of Education, has offered a summer program for four to eight year olds in fifty-six elementary schools. Tot Lot is staffed with professional teachers, their assistants and volunteer workers. It functions very much like Head Start with a full complement of activities planned to be both educationally enriching and "just plain fun." Health Education has not been a very important part of the curriculum, and Tot Lot saw a joint Health Start program as an opportunity to strengthen its project while serving more needy children. In addition, it would enroll more needy children at the Tot Lot centers in Health Start areas.

A group of Flint doctors first heard about Health Start at an American Association of Pediatrics meeting. When they returned from the meeting they passed on their limited information to the Director of Child Development Services of the Community Action Agency (COMPACT). The process of planning and grant preparation was significantly limited by the late notification from the OCD Regional Office of the information that a proposal could be submitted. The COMPACT Director contacted OCD and armed with sketchy guidelines, began to plan. Agencies and resource people most involved in the planning were: the Mott Program of the Flint Board of Education; the medical consultant, Flint Board of Education; the City Department of Health; the Mott Children's Health Center (administrative, dental, and medical personnel); the 4-C Association of Flint-Genesee County; the Parent Policy Committee, Flint Head Start; the Genesee County Dental Society; Dental Care and Education Committee; Delta Dental Plan of Lansing, Michigan; the Volunteer Bureau, Council of Social Agencies; Title I, Flint Board of Education; and the Model Cities Preschool Program, Flint Board of Education. On May 27, 1971, a revised draft of the proposal was sent to the Regional OCD office. Although the proposal was accepted, it was not until the middle of the summer that the Flint Health Start knew exactly how much money the project had received.

For Health Start's purposes, the most significant of Flint's health resources is the Mott Children's Health Center. It is a privately supported ambulatory clinic which provides comprehensive care to Genesee County children from birth through eighteen years. All children must be referred to receive the medical, laboratory, dental, speech and hearing, special education, psychiatry, maternal and infant health, and counseling services. Only children from "borderline medically indigent families," are eligible for the medical and dental services, and those who don't fit the guidelines have to be referred elsewhere. Within these conditions, the Health Center serves as the main treatment resource for Health Start, and the Flint program is lucky to have a facility of this type available. Plans were made with the Mott Health Center in mind.

The original recruitment plan was built around the availability of Home Health School Counselors to solicit applications by contacting known families with pre-kindergarten children in low income areas. By the time

funding was approved, however, school was over and the Home Health Counselors were no longer available. Mention was also made in the plan of the possibility of using satisfied Head Start parents to recruit. However, because of the confusion over funds and the late start-up date, the responsibility had to be taken on by the entire Health Start staff. The staff began with a list of pre-kindergarten children and then sought out other children by inquiry and door-to-door solicitation. Originally recruitment was to be limited to four, five, and six year olds but this policy changed and needy children as young as two were enrolled.

Planned screening called for laboratory tests, including routine blood work and urinalysis, as well as follow-up tests, if required by a pediatrician, for parasites, sickle cell anemia and lead poisoning. TB tests and vision, hearing, speech, and dental screening were also planned.

All of the screening, except dental and T.B., was carried out during one visit to an evening clinic open from 5 - 8 P.M. in a community school. Both children and parents attended. One of the four participating physicians did a medical evaluation, and the Health Coordinator performed laboratory tests. Women trained by the State of Michigan gave vision, hearing and speech screening. Dental screening, through a special arrangement, took place at the Mott Health Center and included prophylaxis, fluoride treatment, bite-wing x-rays, and an examination. TB testing was done at the Tuberculosis Association. As of December, approximately 75% of the children over thirty-six months had received a dental evaluation. Sixty-five percent have had their hearing screened, 67% hematocrit and 66% urine tests, 55% vision screening, and 67% medical evaluations. The most common problems found were cardiovascular, skin, orthopedic, and surgical.

Health Start was to offer follow-up treatment for any conditions found, and it is doing so. Immunizations were planned, and they are now underway at the Department of Health. Almost all medical referrals go to the Mott Health Center, but there is still the problem of non-eligible children. The Nurse Coordinator is identifying other treatment sources to remedy the situation.

Dental follow-up was in limbo for some time until a satisfactory arrangement for treatment could be made. In addition to screening, the Director of the Mott Center Dental Program categorized the children according to whether or not they needed restorative treatment. According to the plan, he then was to supply the list of the names of the children who needed treatment, along with their radiographs to the Delta Dental Plan. The children were then to be referred by Delta to a dentist in private practice for restorative treatment. Some questions arose, however, when private dentists began to do repeat diagnostic exams and wanted to charge for them. Also some children who were found to be in need never received treatment, and, in one case, there were indications that a dentist was charging Health Start more than his customary pediatric fee. Staff from the regional office and dental consultants visited Flint to help work the problems out. Eventually a contract with a built-in self monitoring devise was negotiated. It was also resolved that the Genesee District Dental Society should be involved in implementing a preventive and educational dental component.

Health Education was an essential part of the Health Start project. Plans called for intensive education of both children and parents. Tot Lot teachers and the Health Start staff developed a daily health routine which was used in conjunction with selected parts of the "Healthy, That's Me" curriculum. Each day there were discussions on grooming, nutrition, dental care, brushing teeth, and self-identification. The major drawback of the effort was that it reached only those children over four who could be enrolled in Tot Lot. As a consequence some 133 Health Starters didn't receive any health education. No plans were made for home health education or some other alternative for the two and three year old children.

Parent education was not as complete as was planned largely because of that reoccurring problem--late notification of the granting of program funds by the OCD regional office. Originally a general orientation session was planned, as well as a dental education program, field trips to Mott Health Center Maternal Health Program, identification of neighborhood health resources, and an explanation of how best to use them. The three staff members exclusively concerned with parent health education were to organize and oversee all of the program; they were expected to teach some of them.

Because of the project's late start-up, the planned staff in-service training was severely limited. The staff, hired much later than planned, and including the parent health education section, had to spend all of its time in the first few weeks recruiting. The weekly education sessions held later during the summer had to be devoted to planning and to solving immediate work problems rather than to education. To further complicate matters, the Parent Health Education Assistant quit after a very short time. As a result parent education suffered. Initially, it was provided during weekly one hour sessions at each of five schools. Attendance at the early sessions was poor and the problems of adequate child care became apparent. As the summer progressed classes were held while the parents were at the clinics for their children's screening. More time to adequately plan and prepare a parent education curriculum, as well as to educate the staff, are essential to the growth of the Flint program.

One of the major strengths of the program is the hard working Health Coordinator. She was hired just as the program began and had to overcome the problems already catalogued. It is to her credit that the aides were used effectively even with the absence of much training. And it is on her shoulders that the burden of follow-up lies. Through her efforts, the Flint Health Start project has been successful in tying its program into existing medical and dental resources. Many children who might not have received health care did so, and many other received benefits from the educationally and recreationally rich Tot Lot program.

HILLSBORO

MR. TOOTHDECAY IN CANDY'S CLOTHES
Adapted from "A Wolf in Sheeps Clothing"
Aesop's Fables

Mr. Toothdecay had been creeping close to Johnny for a long time, trying to get into his mouth. He wanted to make a hole in Johnny's teeth, but he could not find a way to get inside.

Mr. Toothdecay wanted to make a hole in Johnny's teeth so badly that he thought and thought for a long time, trying to think of ways to get inside.

One day Mr. Toothdecay saw a dish of candies on the table, and this gave him an idea. All he had to do was to hide in a candy and Johnny would eat him. Mr. Toothdecay quickly stepped into the dish and hid in a candy. Finally, Johnny came by and ate the candy because he was hungry.

"At last," said Mr. Toothdecay. "I'm inside Johnny's mouth. Look at all these teeth that I can give decay."

But like you, Johnny always brushed his teeth after he eats, even after he eats a snack. Since Mr. Toothdecay was in the candy stuck to Johnny's teeth he got brushed away before he could make a hole.

MORAL: Brushing your teeth everytime you eat will help get rid of Mr. Toothdecay and help to keep holes out of your teeth.

In Hillsboro, Oregon, this parody of an Aesop's Fable is just one of many educational tools the Health Start aides are using to fight what is an important and often underestimated health problem of children - tooth decay. The children and their parents are also learning that the seemingly minor skirmish for good teeth is an integral part of the battle for good health. For the first time, rural "Hope" area preschoolers have newly trained allied health workers concerned about their entire health personality. Enrollees are receiving necessary treatment, and they and their families are being trained to practice preventive medicine. They are learning that nutrition is important to teeth, to bones, to social and to intellectual development. And they are learning on a one-to-one basis, in their homes, from the Health Start aides.

These health aides learned their skills in a well planned and run five week training course developed by the Health Start Coordinator, Ms. Marian Keefer, a Public Health Nurse for some twenty years, life long "Hope" resident and a recent university graduate. In addition to the traditional ingredients in this type of training--first aid, discussion of the body's systems, prevention and control of communicable diseases--Ms. Keefer and her staff taught the aides to collect blood samples, give urinalysis tests, strep cultures, the Denver Developmental Screening test, and to make laboratory classifications using microbe screening.

For specific organs, such as the eyes and ears, the aides learned how to screen for disease, how to treat minor ailments, and, of great concern, they learned the mechanics of the referral process.

The mechanics of the referral process--or how to use the system--can only be taught first-hand. To that end the three aides, all previously unemployed women from the areas they now serve, visited every health related facility in or around "Hope." These included the X-ray Service Center, Seventh Day Adventist Health and Welfare Center, Rehabilitation Equipment Center, Juvenile Department, Division of Vocational Rehabilitation, Tualation Valley Workshop, Opportunity Center, Child Development Program of the Health Department, Public Welfare, Home Health Care, Tualation Valley Guidance Clinic, Oregon Medical School and the Retarded Children's Center. They learned which hospitals or clinics take what kinds of referrals and which doctors and dentists are providing service for Health Start children.

Mr. Toothdecay reared his ugly but controllable head during the three day Dental Health Workshop which the Hillsboro staff attended at Lane Community College in Eugene. The program was organized by James Collins, a Public Health Advisor for Region X of HEW, and was an excellent example of the value of coordination of services at the regional level. Participants included all Health Start staff, administrators through aides, from the region's three projects.

The primary dental challenge to the aides is to change behavior patterns of both children and parents. To do this they had to begin personally to realize the importance of oral health and its relationship to general health. Lectures, laboratory demonstrations and clinic experiences were used to teach dental anatomy and diseases, the importance of fluorides, nutrition, oral hygiene, and educational techniques - ergo Mr. Toothdecay.

The course was so successful that the trainees "dental IQ" showed a dramatic rise. This rise in "IQ," in demonstrated knowledge, was matched by a very positive change in personal oral habits. Before the course only 76% knew how to correctly brush their teeth, 70% could identify what foods are bad for teeth, 70% knew how often they should see a dentist, only 54% knew what might happen during a dental visit, and only 24% knew how fluorides affect teeth. After just three days, 100% of the enrollees answered all of these questions correctly. The zeal with which they learned their dental lesson has stayed with them and, in "Hope," health aides have begun home dental plaque classes.

The Mr. Toothdecay the aides are most concerned about lives in the upper northeast section of Washington County, Oregon, in the area called "Hope." Washington County has only 38.9 dentists per 100,000 as compared to 77.5 for Oregon and 51.1 per 100,000 for the nation. The county has 54.2 doctors per 100,000; Oregon has 144.8; and the U.S. has 142.9 per 100,000. There are no doctors or dentists in "Hope." Residents in the area live an average of twenty miles from the nearest health facility and there is no public transportation. To make things more difficult, most people are snowed in during the winter. The present sources of care, if you can make contact, are public health nurses, the Shriner's Hospital in Portland, Emmanuel Outpatient Clinic in Portland, and the University of Oregon's Outpatient Clinic and Crippled Children's Division.

Washington County is afflicted with an unusually high percentage of poverty. In 1960, the county had more poor than 76% of other U.S. counties; in 1966 it had more poor than 88% of other counties. In Hope almost one third (32.8%) of the residents are low income. The area is rural, poor, mainly caucasian, and is dotted with lumber camps.

There are about 250 low-income preschoolers in "Hope" and 118 of them are in Health Start program. Original plans called for serving three, four and five year old children, but when the aides recruited they included needy preschoolers from birth to six years. The Hillsboro project is one of the few in the country that is delegated to a public health department. Last year, before Health Start, the Health Department ran a small project offering limited services to forty-one preschoolers. The results of this small effort identified the lack of knowledge about and lack of practice in the use of local health facilities as the major causes of medical and dental under utilization.

Planning efforts for Health Start were made with recognition of these demographic and social facts. The Hillsboro people had little prior notice of available program funds but managed in approximately three weeks to develop their Health Start proposal. The CAP Director and Resource Director, in consultation with the Chief Nurse, Administrator and Education Director of the Health Department, the State Board of Health, and others from the University of Oregon and a non-profit dental clinic did the planning. Because of the press of time, parents, community residents, and the Health Start Coordinator were not involved in the process. Although the original plan was sketchy, it provided a solid base to build upon and, at points, has proven to be quite innovative. The program has blossomed in addition because of good leadership.

The proposal called for physical exams, innoculations, training of health aides, follow-up care for identified pathology, and a good dose of health education. The planners had the foresight to identify continuity of care as well as career growth and advancement as essential to the success of the program. They built in a career ladder for the Health Start aides which will keep them involved with the children as they begin and progress in school. At the end of the first program year, trained health aides will be hired by the Washington County Department of Health as school health aides to provide increased, ongoing, quality health services to school age children. The aide will begin as a Community Health Aide I and after two years will be eligible to become a Community Health Aide II. This procedure will be ongoing--if Hillsboro has a Health Start project next year, new aides will be hired and will be absorbed into the school system at the end of the program. Constant contact, education, and follow-up with children and their families will provide the continuity of care everyone has agreed is missing and necessary.

As the program developed, plans were modified and refined. The initial physicals for case finding are done in the clinics (a gas station, grange hall, and two churches open one day per week) as planned. In addition, the health aides visit homes to do preliminary screening, to give simple tests, and to get patient histories. Follow-up testing to verify suspected pathology is done in the appropriate facility and is arranged by the health aides. Happily the aides have been able to take a more active and productive role than was first anticipated.

Although the program only began in September, as of December, 50% of the children had had their medical and dental evaluations. A second physical exam planned for the end of the summer to determine changes in child's health status was dropped from the program because of limited resources and because the planned continuity of care should provide adequate ongoing information about the children's health.

The treatment or service component of the Hillsboro project goes along very much as planned. Aides can and do provide first aid and, when more complex treatment is necessary, are well qualified to refer parents and children to appropriate treatment facilities. Three of the sixteen children found needing further medical attention are awaiting care; seven are receiving care; and four have had successful treatment. Forty-three of the fifty-three children found needing dental care are awaiting treatment; eleven are in treatment; one has completed treatment.

Community involvement in all aspects of Health Start is wide. The Elks are providing glasses and food; the Health Department gives immunizations; the State Clinic provides medicine for TB; FISH, a service group, organizes volunteers drivers; and the Seventh Day Adventists offer the preschoolers food.

Health education has become a stronger part of the program since the proposal was written. At first, the planners felt that most home visits would be made by the Public Health Nurse or Nurse Coordinator but, because of the dramatic success of the aide training program and because of their obvious competence, the health aides became the axis of the health education effort. Instead of meeting with families in groups, as originally planned, the health aides are involved in health education on a one-to-one basis in the children's homes. Extensive health education is being given and plans are underway to spend five consecutive days with families to provide intensive dental education. The three aides have divided "Hope" into equal areas and have developed close ties with the families and children they serve.

This is not to say that all is perfect in the Hillsboro Health Start Program. There were real recruitment problems the first year. The health aides were very unhappy with their role as door-to-door saleswomen and felt it took time away from their "real work." Hopefully, word of mouth communication will make this a less arduous task next year.

Planning for this year was clearly too rushed and didn't include many people whose insights could have provided considerable benefit to the program. Another problem was the difficulty in determining need accurately, especially dental need. Armed with the treatment records of the enrollees and with their numbers increased to include parents, the poor, the Health Coordinator and the aides, next year's planning group should be able to deal with these problems.

Other programs certainly have much to learn from the excellent training and use of the Hillsboro aides. If nothing else (and it isn't so), Health Start has educated and permanently "turned on" three resident health advocates who, whatever their future status, will manipulate the health care system to the eternal benefit of the local children.

Mr. Toothdecay won't disappear in "Hope," but he may find the going much much harder.

PENOBSCOT

Health Start in Penobscot, Maine, was an innovative program combining an intensive medical and educational program with an outdoor experience in a lake-front setting for previously unserved Indian and white low income families. Thanks to the Girl Scouts' generosity in sharing their camp site, preschoolers and their parents had the opportunity to enjoy six weeks of recreation and daily health education while the children received health screening and follow-up care. This program was considered experimental from its inception and although its cost per child was higher than other Health Start programs it was funded as an innovative approach worth trying. Not only did it produce the hoped for results, but it also served more children at a lower cost than anticipated, involving and affecting the entire Penobscot community.

For the first time many area youngsters had a day camp experience complete with swimming lessons, nature walks, camp stories and songs, games as well as dental exams, and polio innoculations. Many women of Indian Island had their first chance to get off the Island, learning about first aid in the home and taking sewing and swimming lessons. Unemployed Indian and other low income teenagers had an opportunity to earn money while helping their own people. They became camp counselors and allied health workers taking an active role in the recreational and educational experience of the Health Starters. But more about that later.

Penobscot is the largest county in Maine with a population of 100,000. The greatest population concentration is in the southern end of the county. Approximately twenty percent of the residents, including the entire Indian population, are low income. What jobs there are can be found in the chicken, shoe, pulp, and paper industries. In addition, Sylvania has a plant in the county which is on the verge of closing. A few of the Indians work in the factories; many work as agricultural laborers. The expanded, year around Health Start project serves fifty extremely rural, poor and medically untouched miles.

There are four hospitals in the county only one of which is large. Other health facilities are few and far between. Of the cooperating health facilities only the Old Town Public Health Association is not in Bangor. The others are: Eastern Maine Medical Center, St. Joseph's Hospital, Bangor Health Department, Counseling Center, Family Planning and Education Program (CAP), Pediatric Clinic, EMMC, Speech and Hearing Clinic, Bangor-Brewer TB and Health Association. Maine has only one doctor per 4,300 people.

As soon as the local CAP was informed of its eligibility, with two weeks to go before the grant application deadline, the Head Start Director, Medical Director, and Educational Director became actively involved in planning. As part of their efforts they visited fifteen community agencies in person to ask for help. Originally, Health Start was planned to serve the Indian population of Penobscot County. But when a survey of the younger siblings of Indian Head Start children identified fewer children than had been expected, other low income preschoolers were included.

The innovative Penobscot project was funded at a higher cost per child than other Health Start programs because the camp setting required an unusually large staff. In practice the dollar per enrollee figure dropped significantly because of the extensive in-kind services contributed by the community. As a result when the summer camp was over, Health Start had enough money to open "satellite" centers in the county's most remote areas. These centers offered screening and referral to children, many of whom have never seen a physician.

The objectives of the summer program were based on the premise that the camp atmosphere was a good one in which to make a child's introduction to health care untraumatic. Specifically the project was planned to:

(1) screen for illness

(2) offer all required medical and dental follow-up care

(3) offer health education to parents and children on a daily basis

(4) offer a full nutritional program

(5) offer employment to poor teenage whites and Indians, many of whom need money to go on to college

(6) offer a full recreational program complete with swimming lessons and nature walks

The camp children's screening and case finding were done in a combination of ways, in a combination of environments. Medical histories were taken in the children's homes by either the Health Coordinator (an RN) or a Mainstream teacher loaned to the project. All physicals were done at the camp site by local physicians. Dental exams were given in the dentists' offices, and laboratory tests such as tine and urinalysis were completed either by the Health Coordinator, physicians or the Eastern Maine Medical Association. The Denver Developmental Test was given by Mainstream personnel and the Counseling Center provided a person for one half day per week of testing. Both of these case finding services took place at the camp. Simple eye range and whisper tests were also given at the camp by the Health Coordinator. Counselors screened daily for acute problems and, in addition, used nature walks as an opportunity to test and improve motor coordination. As the program moved into satellite centers, screening was done by the Health Coordinator and cooperating nurses.

The hours of screening and testing in both the camp and "satellite" centers uncovered from thirty to forty dietary anemias, three hernias, one tonsilitis case, one cardiac case, and approximately sixty dental problems. Treatment of these conditions was to be provided by cooperating physicians, dentists, nurses, bac[illegible]p clinics and hospitals---and it is.

Primary and booster DPT, primary and booster polio, measles, and smallpox immunizations were given by the Health Coordinator at camp or in existing school and Head Start clinics. Out of 86 dental evaluations,

49 children were OK; one is awaiting treatment; one was referred and is in treatment; and 35 were referred, treated and cured. Out of 179 medical evaluations 151 Health Starters were OK; one is awaiting treatment; eight were referred and are in treatment; and 19 were referred, treated, and are well. The three children out of 170 tested who have urinary conditions are being treated; and of the 18 enrollees who had positive hemoglobin tests, 14 were referred and are being treated and four have completed successful treatment. Meade and Johnson Company made a special contribution of a one year supply of vitamin pills for each child in need and as typical of other projects, the Health Department furnished the immunizations.

The camp situation offered the Health Start planners a unique opportunity to provide daily individual and group general health education to both children and parents. In addition, it provided time and opportunity to teach parents specific health techniques as they relate to their children. The Health Coordinator and Education Director were to have responsibility for this segment of the program.

As planned, children were to receive twenty minutes of health education per day on subjects such as: know your doctor, nurse, and dentist; personal hygiene; good foods; new foods; physical fitness; body movements; and water safety. Two hour workshops for parents were planned to discuss: basic first aid; water safety; personal hygiene; food purchasing, storage and preparation; menu planning; health hazards (obesity, smoking, drugs and alcohol); family planning; household poisons; the role of health providers; and how to use existing health facilities.

For both children and parents the health education component turned out to be much as planned. The "Healthy, That's Me" curriculum was used only as a resource both because it arrived late and because it was geared to children older than the Health Start enrollees. As a special program the Penobscot County Sheriff's Department, Bangor Police Department, and Brewer Police Department presented a thirty minute talk to the campers on the rules of safety. Over the summer counselors assumed increasingly active roles in the non-classroom, informal educational process. Every afternoon the camp staff had an evaluation session, and the program was modified and strengthened based on the results of these meetings.

There were many educational programs for parents. For example, a Counseling Center staff member led a weekly three hour discussion of subjects concerning child behavior. The Red Cross presented a program on first aid for the home. Thanks to the Penobscot County Expansion Service parents learned about donated commodities and how to use them. One morning a week the Family Planning Center sent a representative to lead discussions. In addition, the University of Maine in Orona donated Head Start films about health and the Penobscot, Bangor and Brewer Police presented a three hour program on drug abuse. Obviously health education was a vital and involving aspect of the summer program. In the satellite centers, however, time and resources to offer these services were not available.

The Penobscot Health Start program was unusually fortunate in the amount and quality of in-kind services received from the community.

In addition to the contributions in time and commodities already mentioned there was other evidence of the involvement of the entire area. As well as loaning the camp site, the Girl Scouts donated $3000.00 worth of tents, lean-to, cabins and other equipment. The caretaker at the camp remained on the Girl Scouts' payroll during the six weeks of the Health Start program and VANIK (a local volunteer agency) provided 40¢ per child per meal to help defray food costs. A local lumber company made and painted twenty tables, and six high school and college students volunteered to make the camp ready for the children. Because of this outpouring of community interest and commitment, the cost per child in the summer program decreased substantially.

Despite the savings through in-kind services, the cost of the Penobscot recreational/health model still may be too high to be widely repeated. As an unusual experimental project, the Penobscot Health Start program served some valuable purposes. As mandated, the project provided medical and dental screening and treatment for low income preschool children. It broadened the horizons of many Indians, especially the women, who had never had the opportunity to get off Indian Island. For the first time, as an outgrowth of parent participation, Indians instigated the formation of a joint Indian/white community association. A very impressive result of this Health Start program was the hiring and training of bright low income Indian and white teenagers to become counselors, educators and health advocates sensitive to the problems of their people. And finally, the community support showed the feasibility of such a program.

TUCSON

Region IX of the Office of Child Development took a risk. In a make-it-or-break-it decision they chose to give their entire $75,000 Health Start appropriation to the bi-county Community Action Agency in Tucson, Arizona, even though the national guidelines called for two to three projects per region. The hope was that if all of the money was concentrated in one area the impact on the community would be greater. It can still not be determined if the program has successfully served 712 low income preschoolers.

Tucson is the largest city of Pima County which is located in southern Arizona. The county, with 9241 square miles, is as big as Connecticut, Delaware, Rhode Island, Chicago, and New York City combined. According to the 1970 census, the county's population is 351,667. Seventy-four percent of these people live in Tucson and the rest in remote rural areas. The two major cities in the bi-county area, Tucson and Nogales, are sixty miles apart.

Santa Cruz County borders Pima County on the souther and is immediately adjacent to the State of Sonora, Mexico. It is Arizona's smallest county, enclosing only 1246 square miles. Santa Cruz lacks a viable tax base and is especially hard hit financially because three-fourths of its land is made up of untaxable federal forests. Unemployment in the area runs continually above 6.5% and over 52% of the residents are below the poverty line. Health Department figures indicate that 62.8% of the 13,966 residents receive some type of federal, state or county aid. Sixty-four percent of the population, or 8946 people, reside in Nogales.

Available pediatric medical services in the two counties are quite different. Both suffer from the fact that Arizona is one of only two states that chose not to participate in the Medicaid program. Obviously this severely limits reimbursement possibilities. Children in Pima County have the considerable advantage of access to Department of Health well-baby clinics, a Model Cities Neighborhood Health Center, the St. Elizabeth's of Hungary Clinic, Pima County Hospital, Crippled Children's and other foundations. Care at these facilities is available either free or at reduced rates. In addition, the county and St. Elizabeth's offer limited dental care. Although these facilities are in or around Tucson, all Pima County children can use them. Lack of familiarity with services coupled with transportation difficulties, especially in rural areas, are the major obstacles to receiving what care is available.

Nogales, on the other hand, has none of the advantages of the Pima County service centers. Very limited care is provided indigents through the county Health Department by the three local M.D.'s who serve the entire population of 8946. The Health Department runs no well-baby clinics and can only be counted on to provide immunizations, vision and hearing screening, some diagnostic services and a minimum of laboratory tests and health education. There are no dentists residing in Nogales so three dentists from Tucson who commute one day a week were to be used in the Health Start project. Only one however, has been used to date who is reimbursed through traditional fee-for-service arrangements. Traditionally, most dental care for Nogales residents is received across the border in Mexico where service is plentiful and cheap.

There can be no question of the medical needs of children in both of these two counties. And it was to these needs that the Office of Child Development, Region IX, responded.

The plan for the bi-county project was primarily developed by the Director of Evaluation and Planning at the Community Action Agency. The original plan was reacted to and refined by representatives from both counties including individuals from the University of Arizona Medical College, both Departments of Public Health, the CAP Area Council in Nogales, the Bi-county Head Start Council, the OCD regional office, and private physicians.

As originally conceived the project was to be divided into three sub-areas; Tucson, rural Pima County, and Nogales. All three areas were to be administered by the Health Start Coordinator in Tucson. Because of the relative abundance of Pima County's treatment resources, the Tucson and rural projects were to concentrate on outreach and referral. Providing transportation was also identified as a major program goal, especially in remote areas in both counties. Region IX encouraged the expenditure of $12,000 of the $75,000 grant for the purchase of three vans, one each to go to the Tucson, rural, and Nogales programs. It was assumed that these vehicles would be used not only by Health Start by by other CAP programs. There was also some hope of arranging extensive dental care through Davis Monthan Air Force Base.

In Nogales, because of the almost complete lack of medical and dental services, the program was to focus on outreach, screening and, most important, treatment. For this reason, a major part of the total budget ($25,000) was earmarked for medical services in Nogales. The central project goal for Nogales was to use the Health Start experience to prove the necessity of creating Santa Cruz County Health Department well-child clinics. All three sub-plans also called for the project aides to offer health education.

In order for Region IX's investment to be realized some major realignments plus some quite minor adjustments had to take place. It became clear that the Tucson/rural county projects were really one, and their unification happened naturally during the early part of the summer. The dental program planned at Davis Monthan Air Force Base met great resistance from the local Dental Society and finally had to be scrapped. Health Education as a formal, planned activity never really became a reality, probably because of the lack of specificity in its planning.

On the positive side, 712 children were recruited into Health Start in both counties. Of the 472 children enrolled in the Tucson/rural project, 275 had medical evaluations and were judged healthy; 44 were referred; 105 were referred and are receiving care; and four were referred and successfully served. Of the 268 children who received dental exams, 194 were OK; 37 were referred; 26 had begun treatment; 11 finished the needed dental treatment. One hundred forty-five were too young to be tested. Negative TB results were found for 316 children tested. Two hundred ninety-six had negative hemoglobin tests and 3 were referred and successfully treated. Surprisingly, there was only one vision problem in 251 children tested and that case has been referred. None of the Health Starters tested had a hearing problem; all given speech tests were OK; and 334 had negative urinalysis tests.

The Nogales statistics are difficult to verify because of the inconsistencies in the health control data and in the statements made by the Nogales aide. It is possible that when the year is over data will show that the children were cared for, but the lack of available medical and dental services coupled with the lack of planning in scheduling appointments have left little time to treat the children enrolled. Unless technical assistance is given to the aide, there is no assurance that the services will ever be completed.

In addition, there were problems which almost doomed the Nogales project to total failure. Questions of jurisdiction, hiring, and general program control became overwhelmingly divisive as the Nogales' summer progressed. Hiring a Health Start aide was impossible and at the beginning of September not one child was enrolled in the program. At this point the Regional Office took an essential leadership role in working these problems out to the advantage of the entire program. Responsibility for the Nogales Health Start program was delegated to the local Santa Cruz County CAP. Whether the Santa Cruz County health officials have been convinced on the need for well-child care has yet to be determined.

The Tucson part of the Health Start project is succeeding. The Nogales project, beset with problems from the start, including the absence of at least one person with medical experience associated directly with the program, has floundered.

TULSA

In June of 1971 the Tulsa City-County Health Department, through a $48,000 Health Start grant, began a multilocation, multiphasic screening program for four and five year old children in Tulsa County's 600 square mile area. 1970 figures record a population of approximately 400,000 in the County with close to 350,000 residing in the greater Tulsa Metropolitan area. The remainder of the population is divided between farms and small rural communities.

Health, housing, environmental and income surveys indicate that the northern, western, and rural sections of the county are poor, medically underserved, and, based on low levels of maternal and child health status, less healthy than the rest of the Tulsa area. In 1970, children entering first grade in these three areas had the highest incompletion rate of D.P.T. and polio immunizations of the county. In some locales, inadequate immunizations ran as high as sixty percent, and, more discouraging, even after passage of a mandatory immunization law, the number of children lacking immunizations has risen, not decreased.

The Health Start planners in the Health Department felt that these immunization figures fairly accurately reflected the levels of preventive child health services received in Tulsa County. From the collected data they concluded that approximately 20%-30% of the 3000 - 4000 four and five year olds in the County were receiving inadequate preventive services. The planners further used this information to preselect project target areas in an attempt to provide health appraisals for previously unreached preschoolers. The project goal was to reach 2000 children, approximately 50% of all children in the county.

The project plan, unique in the Health Start program, called for the development of traveling clinics at twenty-one sites which, in a five station high-volume operation, would offer a computerized health history review; visual, auditory and phonocardioscan screening, physical health appraisal (physio-anatomical systems' examination, speech, dental and developmental assessment); gross urinalysis; TB skin testing; hematocrits and immunizations. Children with failures on any of the tests were to be referred for rescreening and then to be treated if necessary.

The Tulsa project is the only Health Start project using this innovative approach--mass multiphasic screening and referral. One obvious advantage of this model is that more children can be screened than if they all had individual laboratory tests, physical and dental exams. Because the system is designed so that there are more over-referral than under-referrals, the errors will not penalize the children. In itself, the approach is incomplete. Key to the system is having the resources to follow-up the pathologies found. The Tulsa project has available many subsidized pediatric health resources, which can be used for the follow-up treatment. As a result, the only treatment expenditure included in the budget was for eye exams and glasses for approximately 400 children--services unavailable to poor preschoolers in the County.

The Tulsa multiphasic screening program progresses through five basic stages. A successful media campaign directed in large part by one of the fourteen summer student interns brought the project visibility and acceptability. Handbills, fact-sheets, news releases to newspapers, community agencies, TV and radio stations as well as TV and radio "spots," feature newspaper picture stories, special interview shows and publication of weekly schedules of site locations were all used to insure maximum utilization of the program. Special emphasis was placed on securing prime space in small local newspapers to alert rural parents. This intensive PR campaign served two purposes: (1) it encouraged parents to make clinic appointments and so lessened the outreach task and (2) it insured that the parents contacted in the outreach effort knew that the program was reputable.

Outreach, Health Start's two week second-stage, was performed by eight of the summer interns. It was their responsibility to locate children who would benefit from the program, contact their parents, and make sure that the children attended the clinics. If transportation was necessary they provided it. Many techniques were used to supplement their efforts. A saturation flier and poster campaign took place in neighborhoods two weeks to two months before the clinic was due in a particular area. In addition, local community residents such as ministers, park workers, and nursery personnel were enlisted in the effort. One to three days before the clinic was scheduled, outreach workers visited the homes of parents who had expressed interest in the program. They would then canvas door-to-door in neighborhoods of highest need. During the visits specific appointments were made and a questionnaire, to be filled out and brought to the clinic, was left with the family.

Once a child entered a clinic, screening and immunizations proceeded as planned. 1800 of the projected 2000 preschoolers were screened during the forty operating days at the very reasonable cost of $11.00 per child. The figure includes the costs of outreach, publicity, setting up of temporary clinics, and transportation in addition to the actual screening expenses. It does not include the services of a community physician, practical nurse and additional public health nurses who occasionally were detailed by the Tulsa City-County Health Department during the screening phase.

The full-time staff of the clinics included a specially trained public health nurse, a practical nurse and the college student interns. The students were trained to do vision, auditory and phonocardioscan screening, as well as urinalysis and hematocrit laboratory tests, and they were the backbone of the program. Training time was short--two weeks--and the full-group formal program lasted only two days. Some of the subjects covered were effective means of setting up a good patient flow operation, medical and computer terminology, understanding and obtaining the cooperation of four and five year old children, and role playing in the outreach setting. Specific skills required for technical screening duties were taught by personnel from other health department programs.

The staff basically used six forms to complete the screening procedure and to try to assure adequate follow-up. They were: (1) a computerized preadministered history form; (2) a computerized physical and laboratory form completed at each station; (3) a computerized referral sheet to assist in the follow-up effort; (4) an immunization card given as a record to parents; (5) a three copy referral sheet for any referral made to other than Health Start follow-up resources; and (6) a final form given to each child's parents to outline what occurred and what to expect in the way of follow-up. Other information about times and places for services such as family planning and child health appraisal for younger children was also available at the clinics.

The last of the five basic stages of the Tulsa Health Start program was the referral follow-up. The results are not yet in on the effectiveness of this process. The Health Coordinator and a nurse remain as year-round staff to manage this effort. Thus far, the system has been to refer children into the Public Health system and assume they have received treatment. We are awaiting the hard figures which should be available on actual amount and kind of treatment given. The inexpensive multiphasic screening method, no matter how effective on its own terms, must be measured by the treatment completed.

The Tulsa program relied heavily on the summer interns and the payoff was high. Not only did they perform the screening tasks well, but also they developed a good rapport with the families being served. A follow-up study revealed that parents were especially pleased by the manner in which they were approached during the outreach phase of the program. Almost all the parents indicated that they were satisfied with the way the children were treated and particularly, the way the staff involved the preschoolers in the screening procedures.

The Tulsa approach of using well-trained and medically supervised students as outreach and paramedical personnel was entirely successful. They represented an excellent source of temporary health manpower and other Health Start projects may want to look toward students as a competent, easily trained, concerned and sensitive labor force.